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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/366,768	08/04/1999	JONATHAN WADE AIN	TU999033	3462

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EXAMINER	
PHAN, TRI H	
ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 02/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/366,768	Applicant(s) AIN ET AL.	
	Examiner Tri H. Phan	Art Unit 2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☒ Claim(s) *1-10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. This application is in condition for allowance except for the following formal matters: the minor informalities in claims 1-10.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire TWO MONTHS from the mailing date of this letter.

Drawings

2. The drawings filed on 08/04/1999 are acceptable subject to correction of the informalities indicated on the attached "Notice of Draftperson's Patent Drawing Review," PTO-948. In order to avoid abandonment of this application, correction is required in reply to the Office action. The correction will not be held in abeyance.

Claim Objections

3. Claims 1-10 are objected to because of the following informalities:

In Claim 1, Page 19, Line 16, "the serial data" is unclear because it is not know what "the serial data" applicant is referring to. To overcome this deficiency, it is suggested to change "the serial data" to --- serial data ---. Claim 2 (Page 20,

Line 14), Claim 3 (Page 21, Line 13) and Claim 4 (Page 22, Lines 12-13) are objected for the same objection's reason given in Claim 1. Also in Claim 1, Page 19, Line 20, "the target" is unclear what "target" applicant is referring to. It seems to refer back to the "data storage". If this is true, it is suggested to change "data storage" to --- target data storage ---.

In Claim 2, Page 20, Line 10, "the unauthorized transmittal" is unclear because it is not know what "the unauthorized transmittal" applicant is referring to. To overcome this deficiency, it is suggested to change "the unauthorized transmittal" to --- unauthorized transmittal ---. Claim 3 (Page 21, Line 8) and Claim 4 (Page 22, Line 8) are objected for the same objection's reason given in Claim 2.

In Claim 3, Page 21, Line 17, "the target" is unclear because it is not know what "the target" applicant is referring to. To overcome this deficiency, it is suggested to change "the target" to --- a target ---.

In Claim 4, Page 22, Line 30, "the transmission" is unclear because it is not know what "the transmission" applicant is referring to. To overcome this deficiency, it is suggested to change "the transmission" to --- transmission ---. Claim 7 (Page 25, Line 21) is objected for the same objection's reason given in Claim 4. Also in Claim 4, Page 23, Line 9, "decoder" is unclear what "decoder" applicant is referring to. It seems to refer back to the "encoder". If this is true, it is suggested to change "decoder" to --- encoder ---.

In Claim 5, Page 23, Line 22, "the transfer" is unclear because it is not know what "the transfer" applicant is referring to. To overcome this deficiency, it

is suggested to change "the transfer" to --- transfer ---. Claim 6 (Page 24, Line 17), Claim 7 (Page 25, Line 17), Claim 8 (Page 26, Lines 12 and 15) and Claim 9 (Page 27, Line17) are objected for the same objection's reason given in Claim 5.

In Claim 6, Page 24, Line 13, "the destination identifying address" is unclear because it is not know what "the destination identifying address" applicant is referring to. To overcome this deficiency, it is suggested to change "the destination identifying address" to --- destination identifying address ---. Claim 7 (Page 25, Line 12) and Claim 9 (Page 27, Line 12) are objected for the same objection's reason given in Claim 6. Also in Claim 6, Page 24, Line 21, "the generation" is unclear because it is not know what "the generation" applicant is referring to. It is suggested to change "the generation" to --- a generation ---. Claim 10 (Page 28, Line 22) is objected for the same objection's reason.

In Claim 7, Page 25, Line 20, "the source address" is unclear because it is not know what "the source address" applicant is referring to. To overcome this deficiency, it is suggested to change "the source address" to --- a source address ---.

In Claim 8, Page 26, Line 20, "the internal target address" is unclear because it is not know what "the internal target address" applicant is referring to. To overcome this deficiency, it is suggested to change "the internal target address" to --- an internal target address ---. Claim 9 (Page 27, Line 13) is objected for the same objection's reason given in Claim 8. Also in Claim 8, Page 26, Line 19, "the data frames" is unclear because it is not know what "the data

frames" applicant is referring to. It is suggested to change "the data frames" to --- data frames ---.

In Claim 9, Page 26, Line 29, "the limited access data stored" is unclear because it is not know what "the limited access data stored" applicant is referring to. To overcome this deficiency, it is suggested to change "the limited access data stored" to --- limited access data stored ---. Claim 10 (Page 28, Line 3) is objected for the same objection's reason given in Claim 9. Also in Claim 9, Page 26, Line 29, "said method" is unclear because it is not know what "said method" applicant is referring to. It is suggested to change "said method" to --- a method ---. In Page 27, Line 17, "the internal target data storage system" is unclear because it is not know what "the internal target data storage system" applicant is referring to. It is suggested to change "the internal target data storage system" to --- an internal target data storage system ---. In Page 27, Line 23, "the IDLE signals or the data signals" is unclear because it is not know what "the IDLE signals or the data signals" applicant is referring to. It is suggested to the IDLE signals or the data signals" to --- IDLE signals or data signals ---.

In Claim 10, Page 28, Lines 16-17, "the transfer of the data frame" is unclear because it is not know what "the transfer of the data frame" applicant is referring to. To overcome this deficiency, it is suggested to change "the transfer of the data frame" to --- transfer of data frame ---.

Appropriate correction is required.

Reason for Allowance

4. Claims 1-10 are allowed. The following is an examiner's statement of reasons for allowance:

Claims 1-10 are considered allowable since when reading the claims in light of the specification, none of the references of record-alone or in combination disclose or suggest the combination of limitations specified in the independent claims including.

Substantially regarding claim 1, the prior art of record fails to disclose all the functional elements which are specifically arranged in the blocking device for blocking an unauthorized access to limited access data stored in the fibre channel configuration network system including a fabric switch fibre channel interconnecting work stations and data storage devices with an internal fibre channel arbitrated loop having internal work stations and internal data storage systems. The blocking apparatus intercepting data access to the internal data storage system containing the limited access data comprise as claimed:

- a receiving section means for receiving the serialized request for data from a requesting source on the fibre channel from the fabric switch and for transforming the serial data to parallel frames of data;

- a FIFO section for sequentially receiving sets of parallel frames of data from the receiving section and for transmitting the parallel sets of data to the target after reserialization;

- a control section including means for individually sensing each set of parallel frames of data from the FIFO section, means for sensing a start of data frame from one set of the parallel frames of data, means for comparing individual sets of parallel frames of data from the FIFO section after sensing the start of frame data to compare another set of frame data from the FIFO section to allowed addresses stored in the control section, and means for generating IDLE characters representing no data, the control section permitting the transmission of parallel sets of data frames to the target data store if the comparing means senses a match between the allowed addresses and the set of parallel frame of data in the FIFO section and activating the generating means to transmit IDLE characters if no match is sensed; and

- a transmitting section under control of the control section to encode and serialize the parallel sets of data received from the FIFO, or to transmit the IDLE characters if no match is sensed.

In regard to Claim 6, the prior art of record fails to disclose all the steps of the method for blocking an unauthorized access to limited access data stored in the fibre channel configuration network system including the fabric switch fibre channel interconnecting work stations and data storage devices with an internal fibre channel arbitrated loop having internal work stations and internal data

storage systems. The method intercepting data access to the internal data storage system containing the limited access data comprises the steps of:

- accepting serial data from a fibre channel connected to a hub;

- converting the serial data to parallel data;

- encoding the parallel to frames of data;

- sequentially entering the parallel frames of data into word of data in a FIFO store;

- detecting a start of word data in the FIFO store;

- sensing an upper level device path word from the FIFO store;

- comparing the destination identifying address to a target address;

- comparing a source address word from the FIFO store if the destination identifying address matches the target address, otherwise enabling the transfer of the frame word to the target;

- comparing a source address word from the FIFO store to allowed addresses stored in an allowed address store;

- enabling the transfer of frame data from the FIFO to the target if a match is sensed, otherwise, enabling the generation of IDLE characters; encoding the generated IDLE characters and the data from the target into parallel data;

- converting the parallel data into serial data; and

- directing the serial data signals to a fibre channel.

Regarding claim 9, the prior art of record fails to disclose the article of manufacture's method for use in the fibre channel configuration network system

including a fabric switch fibre channel interconnecting work stations and data storage devices with an internal fibre channel arbitrated loop having internal work stations and internal data storage systems, at least one internal data storage system accessed by the target address and containing the limited access data stored. The method intercepting data access to the internal data storage system containing the limited access data, the article of manufacture comprises a computer-readable storage medium tangibly embodying a program of executable computer instructions which may cause the fibre channel configuration network to:

- accept serial data from the fabric switch fibre channel;

- convert the serial data to parallel data;

- decode the parallel data to parallel frames of data;

- sequentially enter the parallel frames of data into words of data in a FIFO store;

- detect a start of frame word data in the FIFO store;

- sense an upper level device path word from the FIFO store;

- compare the destination identifying address from the fibre channel data to the internal target address;

- compare a source address word from the FIFO store to allowed addresses stored in an allowed address store if the destination identifying address matches the internal target address, otherwise enable the transfer of the frame word to the internal target data storage system;

- enable the transfer of frame data from the FIFO to the internal target data store if a match is sensed between the source address and the target address, otherwise, enable the transmission of IDLE characters;

- encode the IDLE signals or the data signals from the internal target data store into parallel signals;

- convert the parallel signals into serial data; and

- direct the serial data to a fibre channel of the fabric switch fibre channel.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lorenz et al. (U.S.6,310,882), **Sherer et al.** (U.S.6,115,376), **Kenworthy** (U.S.6,317,837) and **Berman** (U.S.6,185,203) are all cited to show systems and methods for improving the access control and switching architecture .

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan whose telephone number is (703) 305-7444. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Olms can be reached on (703) 305-4703.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 305-3900.

TP

Tri H. Phan
February 3, 2002

RICKY NGO
PRIMARY EXAMINER